Exemption No. 6820A

UNITED STATES OF AMERICA
DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
RENTON, WASHINGTON 98055-4056

In the matter of the petition of

Boeing Commercial Airplane Group

for an exemption from §§ 25.807(d)(7), 25.813(e), 25.853(d) of Title 14, Code of Federal Regulations

Regulatory Docket No. 29253

PARTIAL GRANT OF EXEMPTION

By letter B-T113-98-7993, dated November 5, 1998, Mr. D. W. Berg, Manager, Certification, Delivery and Fleet Support, Boeing Commercial Airplane Group, P.O. Box 3707, Seattle, WA 98124-2207, petitioned for reconsideration of Exemption No. 6820 to allow additional relief from the requirements of §§ 25.807(d)(7), 25.813(e) and 25.853(d) of Title 14, Code of Federal Regulations (14 CFR). Additional substantiating information was submitted by letters B-T113-98-9044, dated December 16, 1998, and B-T113-99-0920, dated February 3, 1999. The current exemption is a partial grant, which permits, installation of interior doors between certain passenger compartments, flight attendant seats that do not provide direct view, and interior materials that do not comply with heat release smoke emissions requirements on a Boeing 737-700 Increased Gross Weight (IGW) airplane, with certain limitations.

The petitioner requests additional relief from the following regulations:

Section 25.807(d)(7) - Limits the distance between passenger emergency exits to sixty feet.

Section 25.813(e) - Prohibits installation of interior doors in between passenger compartments.

Section 25.853(d) - Limits maximum heat release rates for large panel cabin interior materials.

The petitioner's supportive information is as follows:

"The Federal Aviation Regulations (FARs) do not consider the situation of private use, transport category airplanes, in the FAR 25 requirements. Those requirements are predicated on airline common carrier, commercial passenger operations carrying fare paying passengers from the general public. Boeing believes that the design of an airplane for private use, and the associated operation of the airplane in private use, should justify an exemption, based on the fact the FARs do not currently cover or consider such a design and operation, and a new view of such designs and operations is needed by the FAA. In addition Boeing has proposed alternative requirements which provide an appropriate level of safety for the intended use of the airplanes and for the airplanes occupants."

"Reconsideration Requested

"Further information to support reconsideration for each of the . . . three rules is provided below:

"FAR 25.813(e), Interior Doors Between Compartments

"The FAA position was a partial exemption. The FAA said that no door may be installed in a compartment such that persons, other than occupants of the compartment, would have to pass through that door to reach an emergency exit. Therefore, other doors would be acceptable, such as those to side rooms. Those doors need suitable design features that satisfy: 1) robust dual latching in the open position for taxi, takeoff, and landing,
2) indication on the flight deck of improper door position, and 3) frangibility.

"Boeing requests reconsideration. Although the 737-700 IGW can be considered one of the larger private use airplanes, its cabin width available for interior rooms is still only about 12 feet. Private areas or conference rooms will often need to span the whole cabin in order to be practical. For such arrangements, privacy can only be provided by means of doors, and therefore, an exemption is needed to allow full use of airplane capabilities without compromising safety for those onboard. All passengers are equally important, wherever they are located.

"Further information supporting Boeing's request for reconsideration is provided in Enclosure 1).

"FAR 25.853(d), Interior Materials Flammability

"The FAA position was a partial exemption. The FAA said that interior materials that do not comply with heat release and smoke emissions requirements could be used if the airplane could be evacuated in 30 seconds or less. The FAA also said that a flight deck indication of a fire in any isolated passenger compartment must be provided.

"One of the bases for the FAA position was that actual in service evacuations of airliners typically take about twice as long as the time demonstrated for certification. The FAA has also applied that 2:1 factor to the BBJ as part of the rationale for the 30-second evacuation requirement. Boeing has explained all along that VIP airplane features and passengers are different in several ways than airliners and typical airline passengers. Among those many differences are the less dense interior configuration, and the great familiarity of the frequently flying persons with the interior and exit configuration of the BBJ. These differences are such that any in service factor would tend to be less than 2:1 for the BBJ."

"While certain compartments on the main deck may be unoccupied during taxi, takeoff and landing, they are not isolated like the lower lobe cargo compartments. The cabin crew can readily access all such rooms during flight, and monitor contents and status at any time. The FAA has also previously approved similar and/or audible warnings to flight attendants. Therefore, the more sophisticated fire detection system required for an isolated cargo compartment is not necessary for accessible main deck compartments. All of these rooms have been treated like lavatories, where fire detection is covered by FAR 25.854(a), with a warning light or audible warning to the flight attendant(s). Certification to this requirement has proved to be more than sufficient for such compartments on the main deck, or for compartments accessible from the main deck. Also, such compartments (like closed lavatories) wouldn't be considered as contributing to a post-crash fire. Based on the above rationale, an equivalent level of safety to the literal regulation is achieved."

"Further information supporting Boeing's request for reconsideration is provided in Enclosure 2). In summary, a lower factor for in service evacuation time is appropriate for the BBJ, on the order of 1.5:1. As shown in Enclosure 2, typical materials in the BBJ will result in an average composite OSU value of about 84, with a flashover time of about 90 seconds. If a certification evacuation time of 45 seconds is specified, a typical BBJ in service evacuation time of 68 seconds would be estimated based on a 1.5 factor, and there would still be an additional 22 seconds to flashover. Boeing requests that in reconsidering the partial grant of exemption, the FAA agree that a certification evacuation time of 45 seconds be required for up to 52 passengers.

<u>"FAR 25.807(d)(7), Distance Between Exits</u>

"The FAA position was no exemption. The FAA position was that Boeing had shown no layouts with deactivated overwing exits (OWE). The FAA also said that the 60 ft. minimum distance is needed to address two issues; the number of persons in the way of an individual trying to get to an exit, and disruption/blockage in egress paths due to debris, etc. A reduced number of persons onboard could compensate for a deactivated exit, but doesn't affect blockage due to debris.

"Further information supporting Boeing's request for reconsideration is provided in Enclosure 3), which shows that the BBJ can have an exit path that is actually shorter than that of an FAR 121 certified wide body airliner.

"Exemption Effect

"Because the root issue has been addressed for each rule for which exemption has been requested, the net result of the exemption remains that a suitable level of safety is preserved. The passengers are assured access to the paths to the exits. The paths to the exits meet the requirements. The passengers are assured that adequate (actually excess) exit capacity is provided. They are assured that, at worst, they are only two long steps further from an exit than the rule intends, and generally within the rule requirement (there are very few passengers who could be affected by this). Further, the 45 second evacuation requirement assures that passengers are out of the airplane significantly sooner than under the existing rule, and still have a 50% margin to flashover in a post crash fire scenario. The net effect of the exemption is still to assure the passengers access to emergency exits, excess exit capacity and margin to exposure to post crash fire flashover.

"Consideration of Competitive Issues and Public Interest

"Non-US Aviation Authority Approvals

"This general issue was addressed in Boeing's petition and in the later referenced letters.

"Finally, no discussion of business jet certification would be complete without considering the competitive aspect of these issues. Clearly, the certification basis of the 737-700 IGW is much later than any competitive model, and in the case of the A319CJ, Airbus is emphasizing the different certification requirements in their sales efforts, claiming that their airplane will not be required to meet these more difficult design requirements. Our exemption request only addresses those rules where the nature of the use and operation of the airplane is directly affected, and we have provided an equivalent level of safety to those rules.

"Certification Basis of Various Airplane Models

"Boeing has picked one of its latest models, the 737-700 IGW, as the airframe for the BBJ, with executive/VIP interiors being installed by various completion centers. The 737-700 IGW has a certification basis requiring compliance with many of the latest amendments to FAR 25. Some of the issues being addressed are only issues at all because of these later amendments. For example, if the model 737-300 or 757-200 were instead used as the BBJ platform, there would be no FAA requirement to meet the later interior flammability amendment, because those models only require an earlier FAR 25 amendment level, if operated to FAR 91 or 125. Note that both the 737-300 and 757-200 are still in production.

"Boeing requests the FAA to seriously consider granting exemptions, by also recognizing that the specific certification basis of the 737-700 IGW is not the only aspect, but to also consider that other airplane models, still in production, can be modified for private use. It could be said that exemptions should be granted, just because the certification basis of the 737-700 IGW/BBJ is an undue hindrance, compared to other airplane models currently in production (some Boeing and some not).

"On the other hand, the later certification basis of the 737-700 IGW could be viewed as making it one of the safest airplane models flying today. In addition to having a later certification basis, Boeing added an automatic overwing exit (AOE), which improved (reduced) the overwing hatch opening time by almost 4 seconds. Therefore, the model 737-700 IGW can withstand more relaxation of its certification basis in order to reach the same equivalent level of safety as some other model with an older certification basis, and no AOE.

"Exemptions Will be in the American Public Interest

"Approval of this request for certain exemptions for the Boeing Model 737-700 IGW, when configured for business jet applications, and operated under FAR Part 91 or Part 125, is in the public interest of the people of the United States of America."

"1. Given the proliferation of Executive Configured Transport Category Airplanes currently taking place, and anticipated in the near future, approval of these exemptions will enable the United States manufacturers of Transport Category Airplanes to effectively compete in this expanding market.

"2. Additional sales of United States manufactured airplanes outside of the traditional airline market, and completion of many of them at United States owned and operated Aircraft Completion Facilities, will serve to increase the profitability of these manufacturers and their supplying/supporting companies.

"3. Stability and improved financial performance of these United States companies gives greater job stability to the workers employed by the companies, causing a stabilizing influence to the greater United States economy, due to the consumer pending activities associated with stable workers.

"4. Improved financial performance of United States owned and operated corporations, and increased workforce stability translates into continued and improved local, state, and federal tax revenues which in turn adds to the stability of the total United States economy.

"5. Improved financial performance allows United States corporations to continue to invest in Research and Development allowing the United States to maintain or improve its competitive position in the world economy.

"6. A large number of these types of airplanes will probably be sold to "offshore" clients, improving the United States balance of trade.

"7. Since the passengers aboard these airplanes will not be revenue paying customers of the airlines, there can be no degradation to airline passenger safety, and therefore no detrimental impact the public at large. It is interesting to note the only commenters were modification centers and customers who strongly supported the initial petition.

"8. The exemption request, if granted, allows the FAA to expend resources on this subject only this one time, not for each interior arrangement, and thereafter to concentrate resources on the FAA's highest priorities, including Continuing Operational Safety."

"Conclusion

"Boeing seeks clear and unambiguous requirements applicable to any completion/modification center for installation of an executive interior into a 737-700 IGW (BBJ). We depend upon FAA to publish these requirements so that the requirements and guidance are consistent for all applicants.

"We believe that the unique design features, the reduced number of passengers onboard, taken together with the typical characteristics of the passengers, provide a suitable level of safety for the airplane occupants, considering its private use and operation, even though they may not provide an equivalent level of safety as defined by the current regulations. We urge the FAA to carefully consider these aspects in reconsidering the grant of exemption."

"Boeing believes that some of the FAA's conclusions in their partial grant of exemption are not appropriate for the unique, private use operation of the 737-700 IGW, and additional information has been provided to the FAA in previous letters and herein to support our position. We have shown that the exemptions are in the public interest and that for the unique configurations and operations provide an equivalent level of safety to that intended by the rules." "For the three rules Boeing requests that FAA reconsider its Partial Grant of Exemption No. 6820, based on the additional data provided by Boeing above, and grant an exemption in agreement with the Boeing proposals. Previously, Boeing requested resolution of these exemption issues by January 1999, to support modifications already in progress by completion centers. More time has passed, and this letter urges FAA agreement with our petition for reconsideration in early February 1999."

In addition to the information above, the petitioner provided two position papers, prepared by prospective modifiers of the 737-700 IGW, addressing the issues of interior doors and interior materials. Copies of these papers will be maintained in the docket.

The FAA finds, for good cause, that action on this petition should not be delayed by publication and comment procedures for the following reasons: (1) A summary of the original petition for exemption

was published in the Federal Register on July 2, 1998 (63 FR 36284). There were no comments in opposition to the petition. Twenty four commenters responded to the notice. *All* of the commenters were either prospective modifiers or customers for the Boeing 737-700 Increased Gross Weight airplane, who strongly supported the petition. (2) Further delay on this petition could cause economic harm to those modifiers whose materiel procurement decisions will be substantively affected by the decision on this petition

The FAA's analysis/summary is as follows:

Interior Doors

This issue is clearly quite significant to the segment of the public that will operate these airplanes. The flexibility to partition the airplane in a multitude of locations for customization is regarded as paramount to an acceptable interior. The availability of private meeting space is essential. The FAA acknowledges the desirability of this feature from the operators' point of view.

However, it continues to be the FAA position, that even with the limitations as noted in Exemption No. 6820, an equivalent level of safety cannot be provided when doors span the main cabin aisle. In the petition for reconsideration, the petitioner acknowledges that the level of safety may not be the same, but states that it is adequate for the type of operation involved. The segment of the public operating the airplane and comprising the primary passenger population for these airplanes has requested this exemption, with recognition of the potential change in the level of safety.

After considerable deliberation, the FAA has concluded that the installation of interior doors that span the main cabin aisle can be allowed with certain limitations. (These limitations are in addition to the limitations placed on side aisle doors in Exemption No. 6820). In order to maximize the level of safety, the FAA will require that the doors installed across the main cabin aisle open and close in a transverse direction. That is, the direction of motion of the door must be at a right angle to the longitudinal axis of the airplane. A "pocket door" is one example of such a design. This will tend to minimize the chance that the inertia forces of an accident could force the door closed. The FAA will also require that notification of the existence of the doors be provided to passengers who are flying on the aircraft for the first time. These conditions, in combination with existing door conditions in Exemption No. 6820 (that the doors be frangible, that they have a dual retention means and that a means be provided to notify the flight crew when the door is closed) will assure an adequate level of safety for occupants in private aircraft operations.

In reaching this decision, the FAA is aware that this exemption will likely be a precedent for other private use narrowbody airplanes. In addition, this decision differs with the FAA's proposal in the Notice of Proposed Rulemaking (NPRM) 96-9. The FAA will take into account this exemption during the processing of the final rule which will result from NPRM 96-9.

With respect to means to indicate whether the door is properly configured for takeoff and landing, for the reasons discussed in Exemption No. 6820, this feature is even more essential with this additional grant of exemption. Therefore, that portion of the request for reconsideration is denied.

Interior Materials

Exemption No. 6820 granted relief from the heat release and smoke emissions requirements of § 25.853, provided that an applicant could show that the airplane was capable of being evacuated with 30 seconds, under the conditions of part 25, appendix J. The principle behind this limitation is that the improved materials would provide enhanced evacuation capability by providing additional time to evacuate. Since this additional time is not being provided, the evacuation capability could be maintained, if the airplane could be evacuated faster than is otherwise required. The FAA arrived at the 30 second time limit by reviewing the full-scale fire test data used to establish the requirements for interior materials, and applying the increase in survival time to actual accidents, and relating that improvement to the relative evacuation performance under demonstration conditions. The FAA notes that the petitioner has provided considerably more data for this reconsideration than was provided in support of the original petition. These data enable a much more analytical review of the merits of the petition. In addition, the data indicate that, at least for certain configurations, the nominal average heat release value is expected to be ~84KW-min/m^2, versus the required 65 KW-min/m^2. While this is a positive trend, the petitioner is not proposing any limitations on material heat release, and therefore this factor is not an exigency for this exemption. It is also the petitioner's contention that the particular cabin configuration(s) and mode of operation of the 737-700 IGW make it likely that the evacuation capability under actual accident conditions will more closely model the evacuation capability shown for certification demonstrations.

Using this assumption as a baseline, the supporting data submitted by the petitioner are used to justify a 45 second evacuation time, rather than the 30 seconds required by Exemption No. 6820. The FAA cannot agree that the 737-700 IGW would have an inherently enhanced evacuation capability over commercial airliners, such that it could be expected to perform similarly in an actual accident and a full-scale demonstration. The reasons that actual evacuations typically take longer than demonstrations are multifold, and relate primarily to the nature of the event, not the type of operation of the airplane. In addition, the FAA notes that up to 52 passengers are expected to be carried on this airplane, which is a significant number, and well outside the current, typical private use airplane. While the FAA does not agree with the petitioner's assumption, the FAA does agree that a 45 second time limit for evacuation would provide a substantive improvement over current evacuation requirements. Although not stated in the petition, the FAA understands that the petitioner and prospective modifiers believe the 30 second evacuation time to be unattainable in many cases. While an inability to comply is not sufficient basis for relief from a requirement, it is a basis to assess the practicality of the requirement.

The FAA has carefully reviewed its rationale for the 30 second evacuation time and has again concluded that this time is valid, in order to maintain approximately the same level of safety afforded by improved interior materials. However, it must be noted that the 30 second time cannot be a precise replication of the overall evacuation capability, and there may be other means to achieve the same end. In addition, if the public interest is sufficient, an equivalent level of safety need not be shown, as long as safety is not adversely affected. In reconsidering this petition, the FAA has determined that a 45 second evacuation time would provide for a higher level of safety than is provided on some earlier certificated airplanes, where compliance with the heat release and smoke emissions requirements is not required.

With respect to the fire detection system as required by Exemption No. 6820, the petitioner has suggested changing this limitation to allow the detector required by § 25.854(a), for lavatories to be used in lieu of the detector used for cargo compartments. The FAA does not agree, for several reasons. First, many of these airplanes will not have flight attendants, and will not be required to have flight attendants, if the passenger capacity 19 or less. Second, the compartments in question are significantly larger than lavatories, and will potentially allow a fire to grow to a larger size before detection occurs, if the detector capability is not defined. Third, considering the potential for the airplane to be compartmentalized, alarms intended for a flight attendant could be muted by interior doors and partitions.

Distance Between Exits

As noted in Exemption No. 6820, the FAA is considering development of alternative standards for transport category airplanes operated for private use. One of the requirements that is being addressed is distance between exits. Since the issuance of Exemption No. 6820, the FAA has further refined its proposed alternative criteria, and is now prepared to address this petition in light of those criteria. For the reasons given in the denial of this portion of the original petition, distance between exits is a significant issue, even for a private use airplane. While the number of passengers is not the paramount concern when addressing the distance between exits, it is relevant in determining the type and number of exits required. It is this point that the FAA has considered further in making its determination.

The FAA has previously approved interior arrangements for mixed cargo/passenger airplanes incorporating a single pair of Type I exits for up to 34 passengers. These approvals were done via an exemption, since the regulations did not address that specific exit arrangement. Therefore, it is reasonable to assume that this airplane would be eligible for 34 passengers with only the aft or only the forward pair of exits active. Such an approval might restrict the location of seats to be near the active exits, but would likely be acceptable. The remaining exit pairs could be deactivated. In this case, some owners of the airplanes intend to retain the forward and aft exit pairs, but deactivate the overwing exits. In so doing, a distance of greater than 60 feet between exits is created. It would actually be possible to deactivate additional exits in some arrangements, and thereby eliminate the non-compliance with the 60 foot requirement.

Because of the generally low passenger capacity of the 737-700 IGW, the resultant exit arrangement would still be acceptable in many cases, i.e., when the passenger capacity was 34 or fewer. Based on the work done to develop alternative standards for private use airplanes, the FAA has determined that the level of safety can be maintained, provided the following limitations are applied.

In order to maintain reasonable proximity of passengers to exits, each passenger seat should be longitudinally within 30 feet of an emergency exit, on each side of the fuselage, when both overwing exits are deactivated. When only one overwing exit is deactivated, each passenger seat should be within 30 feet of an exit on one side of the fuselage, and within 60 feet on the side opposite. Generally, the FAA has determined that limitations on the absolute passenger capacity are appropriate where distance to exits exceeds 60 feet. However, because of other limitations in this exemption, those limitations would be redundant. Since the remaining exits could be greater than 60 feet apart, and since the seating arrangements will not be typical of commercial operation, it is also considered necessary to limit the density of seating near the exits. In this case, and in keeping with other approvals for the 737, no more than 34 passenger seats should be located with 30 feet of either pair of floor level exits, when both overwing exits are deactivated. This will prevent overloading a single pair of exits. When only one exit of the pair of overwing exits is deactivated, no restrictions on seating density are applied.

Note that in granting the exemption, the FAA is not making a judgment about the validity of the requirement for distance between exits in general but, rather, has determined that the particular arrangement described herein warrants an exemption. In this case, the arrangement could be modified to deactivate even more exits and, with a small reduction in passenger capacity, be approvable. The FAA does not consider that these additional deactiviations would be in the interest of safety. Granting the exemption is a more appropriate method to protect passenger safety.

Passenger Notification

Although many persons will be frequent passengers on these airplanes, some passengers will be unfamiliar with their operation and with differences with commercial passenger operations. These persons will not be aware of the specific grants of exemption, and might assume that these airplanes were effectively equivalent to airplanes used by a commercial operator. For this reason, the FAA considers that it is necessary for each passenger to be made aware that the particular airplane differs from the occupant safety standards mandated for the airplane type in general. The FAA will allow each operator to determine how best to accomplish this notification, but will require that procedures be developed whereby each passenger is so informed, prior to flying on the airplane for the first time. The notification to any individual need only be accomplished once.

While the FAA is not aware of any specific incidents of economic harm as a result of different standards being applied to different private use airplanes, the FAA acknowledges that significant

upgrading of the occupant safety standards in recent years has made this a distinct possibility. Furthermore, as more airplanes are utilized in executive operation, differences in certification bases will become more significant in terms of the burden of compliance. This issue is generally not a factor for commercial operation, because the operating rules are typically upgraded along with the type design standards, making the requirements effectively the same for all manufacturers. For privately operated airplanes, this is not the case. Thus while a grant of exemption is clearly in the interest of the segment of the public for which it is requested, the FAA agrees that the public at large has the potential to benefit by granting increased flexibility to the manufacture and modification of the 737-700 IGW.

While these additional grants of exemption cannot be said to provide the same level of safety that would be afforded were there strict compliance with the regulations, or in accordance with the initial partial grant, the resultant level of safety is consistent with other private use airplanes. For example, the majority of transport category airplanes used in private operation are not required to comply with the heat release and smoke emissions regulations, by virtue of their earlier certification bases. With respect to interior doors, if the compartments separated by doors are looked at individually, the resultant interior arrangements are typically (although not exclusively) quite similar to small private use airplanes that only require a single pair of exits. The FAA also notes that no other parties have expressed an interest in this petition.

In consideration of the foregoing, I find that a partial grant of exemption is in the public interest and will not adversely affect the level of safety provided by the regulations. Therefore, pursuant to the authority contained in 49 U.S.C. 40113 and 44701, delegated to me by the Administrator (14 CFR § 11.53), the petition of Boeing Commercial Airplane Group for an exemption from the requirements of §§ 25.807(d)(7), 25.813(e), and 25.853 (d), to permit exit to exit distances of greater than sixty feet, to allow installation of interior doors between passenger compartments, and to install interior materials that do not comply with heat release and smoke emissions requirements on the Boeing 737-700 IGW airplane, is hereby granted, with the following provisions:

1. The airplane is not operated for hire, or offered for common carriage.

2. Each door between passenger compartments must be frangible.

3. Each door between passenger compartments must have a means to signal to the flight crew when the door is closed. Appropriate procedures/limitations to ensure that takeoff and landing is prohibited, when any such door is not in the proper takeoff and landing configuration, must be established.

4. Each door between passenger compartments must have dual means to retain it in the open position, each of which are capable of reacting the inertia loads specified in 14 CFR § 25.561.

5. Doors installed across a longitudinal aisle must translate laterally to open and close.

6. When materials are installed that do not comply with the requirements of appendix F, parts IV and V, it must be shown that the passengers and crewmembers can be evacuated in 45 seconds or less, under the conditions described in part 25, appendix J.

7. There must be means, that meets the requirements of § 25.858(a)-(d), to signal the flight crew in the event of a fire in any isolated passenger compartment (as defined in Exemption No. 6820).

8. When the airplane does not comply with the occupant safety requirements of appendix F, parts IV and V, or when doors are installed in specified egress paths, each passenger must be so informed. This notification is only required prior to the first time a person is a passenger on the airplane.

9. When both overwing exits are deactivated, each passenger seat shall be located within 30 feet of an emergency exit, on each side of the airplane, and no more than 34 seats shall be located within 30 feet of either pair of Type I emergency exits.

10. When one overwing exit is deactivated, each passenger seat shall be located within 60 feet of an emergency exit on the side of the airplane in which the exit was deactivated and within 30 feet of an exit on the opposite side of the airplane.

Provisions 3 and 7 of Exemption No. 6820 are withdrawn. Unless modified above, all additional provisions of Exemption No. 6820, together with its conditions and limitations, remain the same and are applicable to this exemption. This amendment is part of, and shall be attached to, Exemption No. 6820.

Issued in Renton, Washington, on February 17, 1999.

/s/ John J. Hickey
John J. Hickey
Acting Manager
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